

## **CLAIMS**

What is claimed is:

1. A method of moving a vehicle closure between multiple positions using a fluid spring comprising the steps of:
  - a) applying a first force to the closure until the closure reaches a first position;
  - b) maintaining the closure in the first position with a stop zone in the fluid spring without application of an external force;
  - c) applying a second force greater than the first force to move the closure from the stop zone to a travel zone in the fluid spring; and
  - d) moving the closure through the travel zone with the fluid spring to a second stop position.
2. The method according to claim 1, wherein the fluid spring includes a cylinder having a groove defining the travel zone.
3. The method according to claim 2, wherein the cylinder includes a length adjoining the groove defining the stop zone.

4. A fluid spring for opening a vehicle closure comprising:
  - a cylinder having first and second fluid chambers;
  - a piston assembly disposed in said cylinder and separating said first and second fluid chambers;
  - a travel zone defined by a first length of said cylinder; and
  - a stop zone defined by a second length of said cylinder adjoining said first length, said piston assembly maintained in an axial position relative to said cylinder in said stop zone, said piston assembly permitted to move relative to said cylinder in said stop zone in response to a first force, and said piston assembly permitted to move relative to said cylinder in said travel zone in response to a second force less than said first force.
5. The fluid spring according to claim 4, wherein said travel zone includes at least one groove in said cylinder along said first length.
6. The fluid spring according to claim 4, wherein said fluid spring includes multiple travel zones.
7. The fluid spring according to claim 4, wherein said fluid spring includes multiple stop zones.

8. A fluid spring comprising:

a cylinder having an inner wall and opposing ends, said cylinder defining first and second fluid chambers;

a piston comprising a piston and a rod with said rod having an end portion supporting said piston, said piston assembly including first and second passages;

at least one seal supported by said piston assembly and at least partially arranged within said first and second passages selectively permitting fluid flow between said first and second chambers;

a stop zone defined by a length of said cylinder; and

a travel zone defined by a groove in said cylinder adjoining said stop zone with said groove spaced from said seal creating a fluid leak past said piston assembly.

9. The fluid spring according to claim 8, wherein said seal includes first and second opposing lips angled in opposite directions with said first and second lips respectively arranged within said first and second passages, said first lip engaging said inner wall.

10. The fluid spring according to claim 9, wherein said seal includes an axial protrusion arranged in the passages in said piston assembly for enhancing sealing between the passages.

11. The fluid spring according to claim 8, wherein said first chamber is a compression chamber and said second chamber is an extension chamber, said fluid flowing through said first passage during a compression stroke and said fluid flowing through said second passage during an extension stroke.

12. The fluid spring according to claim 8, wherein said cylinder includes multiple grooves axially spaced from one another defining multiple travel zones.

13. The fluid spring according to claim 12, wherein said fluid spring includes multiple stop zones.